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10/064,251	06/25/2002	Guangzhi Li	2001-0337	8434
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AT&T CORP. ROOM 2A207 ONE AT&T WAY BEDMINSTER, NJ 07921			EXAMINER MERED, HABTE	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/064,251

Applicant(s)

LI ET AL.

Examiner

Habte Mered

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/6/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The amendment filed on 6/06/2007 has been entered and fully considered.
2. Claims 1-20 are pending. Claims 1, 6, and 10 are the base independent claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-5 and 17-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen (US Pub. No. 2001/0032271 A1) in view of Voelker (US 5, 856, 981) and Montpetit (US 6, 366, 761).

*Allen teaches a method for ensuring path diversity across a communication network.*

2. Regarding **claim 1**, Allen discloses a method for signaling in a mesh telecommunication network (**See Figure 1**) comprising the steps of: receiving a request to establish a label switched path through the mesh network (**See Paragraph 24**); computing a service path and a restoration path (**See Paragraph 25**); (iii) sending a label switched path request along the restoration path and wherein the label switched path request includes service path information. (**See Paragraph 30 and 38**)

Allen fails to teach requesting reservation of shared resources along the restoration path without allocating the shared resources and responsive to a determination that the label switched path has been switched to the service path,

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sending a release request to a plurality of nodes along the restoration path, the release request adopted to cause a release of a restoration path resource allocation, the label switched path switched responsive to a repair of a failure at least one component comprised by the service path, the release request adopted to cause the release of the restoration path resource allocation without causing a release of reserved resources associated with the restoration path and without causing a removal of the restoration path.

*Voelker teaches path restoration schemes for connection-oriented networks.*

Voelker discloses requesting reservation of shared resources along the restoration path without allocating the shared resources and responsive to a determination that the label switched path has been switched to the service path **(Voelker begins in Column 2:1-3 to teach that pre-determined and calculated restoration path is stored and refers to restoration path as contingent path. Further in Column 2:4-10 and Column 3:36-38 that he shows the contingent path is made up from links shared by different connections. Finally Voelker in Columns 2:14-45, 7:12-25 and 7:45-50),** sending a release request to a plurality of nodes along the restoration path, the release request adopted to cause a release of a restoration path resource allocation, the label switched path switched responsive to a repair of a failure at least one component comprised by the service path **(See Column 5:56-67 – the owner of the connection, i.e. the originating node, can trigger the allocation and deallocation procedure and inherently involves some form of message being sent along the nodes defining the path as illustrated in Column**

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**3:31-35** ), the release request adopted to cause the release of the restoration path resource allocation without causing a release of reserved resources associated with the restoration path and without causing a removal of the restoration path (**See Column 5:56-67 and Column 11:64-67 and Figure 7, step 604**) .

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Allen's method to include a step of requesting reservation of shared resources along the restoration path without allocating the shared resources and responsive to a determination that the label switched path has been switched to the service path, sending a release request to a plurality of nodes along the restoration path, the release request adopted to cause a release of a restoration path resource allocation, the label switched path switched responsive to a repair of a failure at least one component comprised by the service path, the release request adopted to cause the release of the restoration path resource allocation without causing a release of reserved resources associated with the restoration path and without causing a removal of the restoration path. The motivation being to provide a distributed way of responding to failures in a network in order to establish replacement connections rapidly as illustrated by Voelker in Column 1:60-67.

Allen fails to disclose a message with a flag wherein the flag is used to indicate resources should either be allocated or de-allocated.

*Montpetit teaches method of implementing bandwidth on demand allocation in a satellite system.*

Montpetit discloses a message with a flag wherein the flag is used to indicate resources should either be allocated or de-allocated. **(He teaches a bandwidth request message with a flag set to either cause allocating or de-allocating of bandwidth – see Column 10:50-62 and Figure 8)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Allen's method to include a step of using a message with a flag wherein the flag is used to indicate resources should either be allocated or de-allocated. The motivation being to establish in existing data communication networks a mechanism whereby bandwidth is allocated on-demand.

3. Regarding **claim 2**, Allen discloses a method wherein the service path information comprises a list of link used along the service path. **(See paragraphs 26 and 28)**

4. Regarding **claim 3**, Allen discloses wherein the service path information comprises a list of shared risk link groups traversed by the service path. **(See paragraphs 31 and 38)**

5. Regarding **claim 4**, Allen discloses a method wherein the label switched path request is an RSVP PATH message. **(See paragraph 25)**

6. Regarding **Claim 5**, Allen discloses a method wherein the mesh network is an optical network. **(See paragraph 8)**

7. Regarding **claim 17**, the combination of Allen, Voelker and Montpetit discloses a method, further comprising: reserving the resources along the restoration path if and only if the label switched path request comprises a shared reservation flag, the shared

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reservation flag indicative of whether other flags are needed to support restoration.

**(Montpetit teaches a bandwidth request message with a flag set to either cause allocating or de-allocating of bandwidth – see Column 10:50-62 and Figure 8)**

8. Regarding **claim 18**, the combination of Allen, Voelker and Montpetit discloses a method further comprising: allocating the shared resources along the restoration path responsive to a detected failure in the mesh network. **(See Voelker's Figure 6)**

9. Regarding **claim 19**, the combination of Allen, Voelker and Montpetit discloses a method wherein the label switched path request comprises a bit flag indicative of whether the label switched path is the service path or the restoration path. **(See Allen Paragraph 38)**

10. Regarding **claim 20**, the combination of Allen, Voelker and Montpetit discloses a method wherein the label switched path request comprises a secondary bit indicative that the restoration path is a backup path for the service path. **(See Allen Paragraph 38)**

11. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Voelker and Montpetit as applied to claim 1 above, and further in view of Graves et al (US 6, 741, 572), hereinafter referred to as Graves.

*Graves discloses architectures for communication networks.*

The combination of Allen, Voelker and Montpetit discloses the existence of shared resources along the restoration path as indicated in the rejection of claim 1.

The combination of Allen, Montpetit and Voelker however fails to disclose a method of further comprising removing the reservation of shared resources along the

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restoration path responsive to an error message flag indicating that the restoration path could not be setup.

Graves discloses a method of further comprising removing the reservation of shared resources along the restoration path responsive to an error message flag indicating that the restoration path could not be setup. **(See Fig 6B and Column 16:43-58)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Allen's and Lu's method to incorporate a method of further comprising removing the reservation of shared resources along the restoration path responsive to an error message flag indicating that the restoration path could not be setup. The motivation is to make bandwidth that cannot be utilized available to other resources on demand as indicated in Graves Column 5:5-12.

12. **Claims 6, 8, 10, and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al (US 6, 442, 132), hereinafter referred to as Burns, in view of Sasaki et al (US Pub. No. 2001/0036153), hereinafter referred to as Sasaki.

*Burns teaches bridge-and-roll techniques on ATM virtual connections.*

13. Regarding **claim 6**, Burns discloses a method for signaling in a mesh telecommunication network comprising the steps of: sending a first message to the destination node requesting that the destination node bridge and roll the service path and the restoration path **(See Column 4:1-3 and Column 3:13-23)**; and if a second message is received from the destination node confirming that the destination node has



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bridged and rolled the service path and the restoration path, halting transmissions along the restoration path (**See Column 4:11-20**).

Burns does not expressively disclose that the second message comprises an object that comprises a code, a first possible value of the code indicative that bridging has been completed, a second possible value of the code indicative that a roll/bridge has been completed, a third possible value of the code indicative that a roll has been completed.

However, Burns clearly shows message exchanges occur between the source and destination in attempting to set up a bridge and roll operation, which is a notoriously known telecom operation. Clearly Burns teaches the second message in Column 4:10 indicating a roll completion and as suggested by Burns in Column 3:55 a bridge has to occur at the destination before the destination rolls and hence the same message can be interpreted to be a bridge and roll completion too. Hence it is the position of the Examiner that the teachings of Burns suggest a 2<sup>nd</sup> message indicating the completion of roll and roll/bridge operation at the destination. Even though the Applicant claims a 2<sup>nd</sup> message with a data structure of an object code or flag with different values, the claimed 2<sup>nd</sup> message simply accomplishes the well known bridge and roll operation. The Applicant's 2<sup>nd</sup> message is simply a different way of accomplishing the well known bridge and roll operation that is adequately taught by Burns and the Applicant has not established any criticality for the need of such a 2<sup>nd</sup> message with such an obvious type of flag or code. Therefore it will be obvious to one ordinarily skilled in the art to either

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use Burn's or Applicant's or any variation of Burn's method to accomplish the same end result, the end result being a bridge and roll operation.

Burns however fails to disclose bridging a signal onto both a service path and a restoration path to a destination node in the mesh network the signal bridged responsive to a request to normalize a restored connection; and sending a third message to the destination node confirming that the connection is normalized *Sasaki also teaches rerouting traffic to a secondary path after normalization.*

Sasaki discloses sending a third message **(See Paragraph 196, ACK Bridge and Roll Message)** to the destination node confirming that the connection is normalized in a mesh telecommunication network **(See Paragraphs 6 and 90)**. Sasaki also discloses bridging a signal onto both a service path and a restoration path to a destination node in the mesh network **(See Paragraph 195)**, the signal bridged responsive to a request to normalize a restored connection **(See Paragraph 193)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Burn's method to include a "bridge and roll" method with the step of bridging a signal onto both a service path and a restoration path to a destination node in the mesh network, the signal bridged responsive to a request to normalize a restored connection and sending a third message to the destination node confirming that the connection is normalized in a mesh telecommunication network. The motivation being such method provides a non-disruptive service transfer into the Primary path as shown in Sasaki's paragraph 30.

14. Regarding **claim 10**, Burns discloses a method for signaling in a mesh telecommunication network comprising the steps of sending a second message to a source node confirming that a service path and a restoration path have been bridged and rolled (**See Column 4:1-3 and Column 3:13-23**), the second message sent responsive to a received first message, the first message sent responsive to a transmission of a signal (**See Column 3:60-64**), the bridged signal transmitted responsive to a request to normalize a restored connection(**See Column 3:13-23 and Column 4:11-20**).

Burns does not expressively disclose that the second message comprises an object that comprises a code, a first possible value of the code indicative that bridging has been completed, a second possible value of the code indicative that a roll/bridge has been completed, a third possible value of the code indicative that a roll has been completed.

However, Burns clearly shows message exchanges occur between the source and destination in attempting to set up a bridge and roll operation, which is a notoriously known telecom operation. Clearly Burns teaches the second message in Column 4:10 indicating a roll completion and as suggested by Burns in Column 3:55 a bridge has to occur at the destination before the destination rolls and hence the same message can be interpreted to be a bridge and roll completion too. Hence it is the position of the Examiner that the teachings of Burns suggest a 2<sup>nd</sup> message indicating the completion of roll and roll/bridge operation at the destination. Even though the Applicant claims a 2<sup>nd</sup> message with a data structure of an object code or flag with different values, the

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claimed 2<sup>nd</sup> message simply accomplishes the well known bridge and roll operation and cannot be given any patentable weight. The Applicant's 2<sup>nd</sup> message is simply a different way of accomplishing the well known bridge and roll operation that is adequately taught by Burns and the Applicant has not established any criticality for the need of such a 2<sup>nd</sup> message with such an obvious type of flag or code.

Burns fails to disclose that the signal bridged onto both the service path and a restoration path to a destination node in the mesh network and if a third message is received from the source node confirming that the connection has been normalized, sending a fourth message along the restoration path freeing resources reserved for the restoration path.

Sasaki discloses that the signal is bridged onto both the service path and a restoration path to a destination node in the mesh network **(See Paragraphs 193 and 195)** and if a third message is received from the source node confirming that the connection has been normalized **(See Paragraphs 154 and 155)**, sending a fourth message along the restoration path freeing resources reserved for the restoration path **(See Paragraph 77 and 195 as it indicates the restoration path is released. However, from the discussion in Paragraphs 222 and 224 require message exchange to setup a path between nodes and inherently will require a release message to tear down a path and release resources).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Burn's method to include the signal bridged onto both the service path and a restoration path to a destination node in the mesh network and if a

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third message is received from the source node confirming that the connection has been normalized, sending a fourth message along the restoration path freeing resources reserved for the restoration path. The motivation being such method provides a non-disruptive service transfer into the Primary path as shown in Sasaki's paragraph 30.

15. Regarding **claims 8 and 12**, Burns fails to disclose a method of further comprising the step of verifying the service path prior to normalizing the connection.

Sasaki discloses a method of further comprising the step of verifying the service path prior to normalizing the connection. **(See Figure 14, steps A4, A5, and A6. See Paragraphs 159, 161, 191 and 192)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Burn's method to include a step of verifying the service path prior to normalizing the connection. The motivation being to fully ensure that the primary working that has been repaired is fully operational before switching from the secondary path to the primary path as detailed by Sasaki in paragraph 82.

16. **Claims 7 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Sasaki as applied to claims 6 and 10 respectively above, and further in view of Kim et al (Byeongsik Kim, Woojik Chan, Janeho Yoo, "Constraint-based LSP setup message reversing of CR-LDP", Pages 875-880, IEEE, February 2, 2001), hereinafter referred to as Kim.

The combination of Burns and Sasaki fails to disclose a method, where in the messages are RSVP messages.

Kim discloses a method, where in the messages are RSVP messages. **(See Page 877, 1<sup>st</sup> Column, 3<sup>rd</sup> Paragraph)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Burns' and Sasaki's method to incorporate a method wherein the messages are RSVP messages. The motivation being to keep the link state information kept in the database of each node up to date and to provide a means to inform each node a feedback to indicate if the path has been setup or not as RSVP messages has such capability as stated in Kim on Page 877, 1<sup>st</sup> Column, 3<sup>rd</sup> Paragraph and also in the abstract as well as on the same page in section 2.3 the piggyback mechanism of RSVP is used to accomplish the stated motivation.

17. **Claims 9 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Sasaki as applied to claims 6 and 12 respectively above, and further in view of Nagarajan et al (US 7, 099 327), hereinafter referred to as Nagarajan.

The combination of Burns and Sasaki fails to teach a method wherein the service path is verified using LMP.

*Nagarajan teaches an Optical Transport Network.*

Nagarajan discloses a method wherein the service path is verified using LMP **(See Column 3:63-67)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Burns' and Sasaki's method to incorporate a method based on LMP. The motivation being Link Management Protocol (LMP) is ideal and optimal for using it in Optical Networks to compute the optical path as illustrated in

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Nagarajan's Column 3:63-67. Further evidence of LMP to be optimal is found in Graves et al (US Pub. No. 20020191250) in an optimized switch network as stated in paragraph 206 and Graves shows the higher qualities of LMP in paragraph 213 as it provides control channel management and protection as well as link connectivity verification and fault detection/isolation making LMP an optimal choice in link based networks like optical networks.

18. **Claims 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Sasaki as applied to claim 10 above, and further in view of Jamieson et al (US 7039687), hereinafter referred to as Jamieson.

19. Regarding **claim 14**, the combination of Burns and Sasaki fail to disclose a method further comprising resolving a determined label contention associated with normalizing the connection via a downstream label assignment for a uni-directional Label Switched Path.

*Jamieson discloses shared MPLS network between two or more private networks.*

Jamieson discloses a method further comprising resolving a determined label contention associated with normalizing the connection via a downstream label assignment for a uni-directional Label Switched Path. **(See Column 4:55-67)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Burns' and Sasaki's method further comprising resolving a determined label contention associated with normalizing the connection via a downstream label assignment for a uni-directional Label Switched

Path. The motivation being to minimize contention for resources as disclosed in Jamieson Column 1:30-35.

20. **Claims 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Sasaki as applied to claim 10 above, and further in view of Berger et al (Generalized MPLS – Signaling Functional Description, draft – Network Working Group Internet Draft, May 2001), hereinafter referred to as Berger.

21. Regarding **claim 15**, the combination of Burns and Sasaki fail to disclose a method further comprising resolving a determined label contention associated with normalizing the connection via a higher node identification label assignment for a Bi-directional Label Switched Path.

*Berger teaches GMPLS Signaling Standards.*

*Berger discloses* a method further comprising resolving a determined label contention associated with normalizing the connection via a higher node identification label assignment for a Bi-directional Label Switched Path. **(See Page 17 Section 4.2)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Burns' and Sasaki's method further comprising resolving a determined label contention associated with normalizing the connection via a higher node identification label assignment for a Bi-directional Label Switched Path. The motivation being to minimize contention for resources as disclosed in Section 4.2 of Berger.

### ***Response to Arguments***



22. Applicant's arguments filed 6/06/2007 have been fully considered but they are not persuasive.

23. Applicant's arguments with respect to independent claims 1 and dependent claims 2-5 have been considered but are moot in view of the new ground(s) of rejection.

24. Applicant has pointed out in the Remarks on page 6 that claims 14 and 15 have not been considered in the previous Office Action. Claims 14 and 15 have been considered in this Office Action and proper rejection based on prior art has been provided and for this very reason this Office Action has not been made final.

25. In the Remarks, on pages 11 and 12 Applicant argues with respect to claim 6 and on pages 15 and 16 with respect to claim 10 that the rejection does not address the limitation requiring a 2<sup>nd</sup> message comprising a code and the different code values indicate the completion of bridging or roll or roll/bridge. Applicant argues further that a prima facie case of obviousness has not been made. Applicant also argues Examiner has made unfounded assertions but is not sufficient to address the missing limitation.

Examiner respectfully disagrees. The limitation claimed in independent claims 6 and 10 requiring A 2<sup>nd</sup> message comprising a code and the different code values indicate the completion of bridging or roll or roll/bridge and has been adequately addressed by Burns.

Burns does not expressively disclose that the second message comprises an object that comprises a code, a first possible value of the code indicative that bridging has been completed, a second possible value of the code indicative that a

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roll/bridge has been completed, a third possible value of the code indicative that a roll has been completed.

However, Burns clearly shows message exchanges occur between the source and destination in attempting to set up a bridge and roll operation, which is a notoriously known telecom operation. Clearly Burns teaches the second message in Column 4:10 indicating a roll completion and as suggested by Burns in Column 3:55 a bridge has to occur at the destination before the destination rolls and hence the same message can be interpreted to be a bridge and roll completion too. Hence it is the position of the Examiner that the teachings of Burns suggest a 2<sup>nd</sup> message indicating the completion of roll and roll/bridge operation at the destination.

Even though the Applicant claims a 2<sup>nd</sup> message with a data structure of an object code or flag with different values, the claimed 2<sup>nd</sup> message simply accomplishes the well known bridge and roll operation and cannot be given any patentable weight. The Applicant's 2<sup>nd</sup> message is simply a different way of accomplishing the well known bridge and roll operation that is adequately taught by Burns and the Applicant has not established any criticality for the need of such a 2<sup>nd</sup> message with such an obvious type of flag or code.

Finally Applicant simply argues in the Remarks on page 11 section 2.a that prima facie case of obviousness has not been made without stating with evidence why the cited prior arts are not obvious to combine for one ordinarily skilled in the art. Further Applicant has not provided any reason why the stated motivation supported by evidence

in the cited prior arts is not sufficient for motivating one ordinarily skilled in the art to combine Burns with Sasaki.

26. In the Remarks, on page 15 Applicant argues with respect to claim 10 the inherency of a fourth message is not established.

Examiner respectfully disagrees. Setting a path between nodes in both Burns and Sasaki is done via message exchanges. Tearing up a path and releasing resources have to also use exchanges of messages between nodes. Since in this Office Action the evidence supporting a fourth message was based on Sasaki, Examiner first established that path setup messages are exchanged between nodes when a path is setup as evidenced in Sasaki paragraphs 222-224. In order to setup or tear down a given path, messages have to be exchanged between nodes involved in the path simply because coordination is required and the operation in Sasaki is software based and path setup and tear down/release messages are inherent. Further in paragraphs 222 it is clear that a switched virtual circuit is being setup based on ATM protocol and such protocol supports tear down messages. Hence from the Examiner's perspective the inherency of such a 4<sup>th</sup> message for tearing down path and releasing resources is well established given that in Sasaki's paragraphs 77, 195, and 220 the alternate or restoration path is torn down and released.

27. In the Remarks, on pages 13 and 17, Applicant argues with respect to claims 7 and 11 that the motivation provided is not supported by evidence.

Examiner respectfully disagrees. The motivation provided is directly or indirectly stated in the relevant sections of Kim cited by the Examiner in order to reject claims In

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this Office Action it is now clearly indicated where the evidence for the cited motivation exists in the prior art taught by Kim.

28. In the Remarks, on pages 14 and 17, Applicant argues with respect to claims 9 and 13 that the evidence provided to support the motivation is inadequate and the cited section does not state LMP is ideal and optimal.

Examiner respectfully disagrees. First one needs to ask why is the LMP used and the answer is to verify if the service path that is an optimal path compared to the restoration path. Second Nagarajan states unequivocally that LMP is known in the art (Column 3:63-67) as a verification protocol for optical networks. It is clear from these two facts that LMP is ideal for optimal optical path and hence to state LMP is ideal and optimal for using it in Optical Networks. In this Office Action further support for LMP to be optimal is found in Graves et al (US Pub. No. 20020191250) in an optimized switch network as stated in paragraph 206 and Graves shows the higher qualities of LMP in paragraph 213 as it provides control channel management and protection as well as link connectivity verification and fault detection/isolation making LMP an optimal choice in link based networks like optical networks.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on 571 272 7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8-29-2007

HM



DORIS H. TO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600